



Spotlight

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Don Penders, a milk rating officer, and Bob Soderstrom, a food safety officer, inspect drinking water supplied to cows on a Pierce County farm. Penders and Soderstrom work for the Food Safety and Animal Health Division in Olympia.

Spotlight on the Dairy Program

People in food safety circles often talk about preventing foodborne illness “from farm to table.” Nearly all Department of Agriculture programs play some role in getting produce from the farm to the consumer. But the program that most closely shepherds a product from farmer to consumer is the Dairy Program.

The Dairy Program is part of the Food Safety and Animal Health Division. The program is divided into two sections — Compliance and Program Development — that share responsibility for ensuring that dairy products are safe and wholesome.

Compliance

The Compliance Section is responsible for the inspection and regulation of the Dairy Program. Compliance staff sample products, inspect producers and maintain official files. Any regulatory action taken against a producer or processor must be taken by compliance staff.

Program Development

The Program Development Section includes the Milk Rating Program. Milk raters grade processors and producer groups to determine substantial compliance with the Pasteurized Milk Ordinance.

A numerical score is computed and reported to the U.S. Food and Drug Administration. Plants or groups that score above 90 are eligible to ship milk across state lines. Program Development has no regulatory authority. Problems noted by milk raters are referred to compliance staff for resolution.

Milk is first in value of production

Washington dairy farmers produced a record-breaking 5.326 billion pounds of milk last year.

While other industries suffered due to the Asian economic crisis, dairy prices rose. And, for the first time since 1989, milk was Washington’s top commodity with a production value of \$847.6 million.

Nationally, the state has ranked eighth in milk production since 1994. Although the number of cows is falling, production per cow is climbing.

About 26 million pounds of milk are fed to calves on farms where the milk is produced. Another 190 million pounds are sold directly to consumers.

Most milk — 5.109 billion pounds with a market value of \$843.3 million — is sold to dairy food processors.

Farmers in Yakima County produce more milk than any other county. Last year, 74 farmers there produced about 1.356 billion pounds of milk at a value of \$208.8 million.

Food safety starts on the farm

In Pierce County, efforts to ensure that milk is safe and wholesome begin in 22 milking parlors where Bob Soderstrom, a food safety officer who works out of his Olympia home, examines the cleanliness of the buildings and the equipment.

Next, he looks for evidence of any drug not labeled for use in milk-producing cows. Sometimes he watches the milkers work — to see if the cows are clean and healthy.

After checking the cows, milk storage area and milking parlor operations, Soderstrom inspects the construction and maintenance of the farm's potable water distribution system. This inspection helps to ensure that only water that is "fit to drink" is used in the milk house or milking parlor.

"I look for any problems that might allow contaminated water to enter the clean water system," Soderstrom said. "Bacteria in water reproduce quickly and could cause illness in consumers."

Soderstrom inspects every Pierce County dairy. He has authority to halt milk shipments if he determines a farm poses an imminent public health threat.

However, in most cases, farms that fail to meet established standards are issued a notice of correction. This gives the farmer time to correct the violations.

The agency's 25 food safety officers inspect all 760 dairy farms in the state once every five months, all 42 dairy plants once every three

months and all 226 bulk milk tankers once a year.

Food safety officers also evaluate 379 licensed dairy technicians that sample raw milk at each dairy as the milk is loaded into tanker trucks.

Raw milk samples ultimately determine how much a farmer is paid. Each sample is analyzed for butterfat, protein, bacteria and leukocytes (white blood cells).

High butterfat and protein content commands a premium price. High bacteria or leukocyte counts can mean trouble. Bacteria may cause illness and leukocytes are evidence that the cows may have an infection that could transfer bacteria to the milk.

When milk and dairy products are ready for market,



Bob Soderstrom inspects the construction and maintenance of a farm's potable water distribution system to ensure that only water that is "fit to drink" is used in the milk house or milking parlor.

the food safety inspectors step up to the plate again. They take more than 4,000 finished milk samples to ensure it

meets the Grade A standards of the state and the Interstate Milk Shipper's Program.

Profile: 20 years with Penders and Soderstrom

Don Penders grew up on a non-electric farm in upstate New York where cows were milked by hand, and milk was shipped in 10-gallon cans. He served as a military food inspector for 20 years before he joined the agency in 1975 as a food safety officer. Penders worked as a field inspector in the Spokane area for six years. He was then promoted to field supervisor for Eastern Washington and milk rating officer. His position as milk rating officer was moved to Olympia in 1993.

"The most significant changes in the industry since I came to work here are the continuing consolidation within the industry, and the rapid changes technology has brought," Penders said.

"When I started, there were 165 dairy farms and 16 dairy plants in the Spokane area alone. There now are 35 farms and four plants in that area and a larger supply of milk."



In the 20-some years Soderstrom (l) and Penders have worked for the agency, daily milk production per cow has gone from 45 pounds to 80 pounds.

Bob Soderstrom joined the agency in 1978 as a food safety officer. At that time, the dairy and food safety inspections were separate. Soderstrom worked for food safety until 1993, when the programs were consolidated.

Soderstrom had no experience with the dairy industry prior to the merger. He took full advantage of intense formal training on dairy laws and regulations, and a lot of on-the-job training.

"The biggest change since I've been with the Dairy Program is the on-going efforts the management team has made to get us all thoroughly trained," said Soderstrom. "It's a hard thing to do. The time and effort they've invested in bringing us all into continuity with uniform inspection techniques is amazing."

Meeting national requirements

When it comes to interstate shipment of milk, the buck stops on Don Penders' desk.

A milk rating officer in Olympia, Penders inspects about half the state's dairy farms once every two years.

The other half is inspected by fellow milk rating officer, Jim Pressley, also in Olympia.

Penders' farm inspection runs parallel to that conducted by Soderstrom and the other food safety officers.

The difference is that he can take no regulatory action against the license of a single dairy. Instead, he does an area survey of several dairies that send their milk to the same plant or cooperative.

Penders uses a weighted average, based on the size of the dairy herd, to assign a group score following his survey of the dairies in an area. Then he heads back to the office where he reviews records compiled by the food safety officers to ensure that

inspections, food and water samples are on schedule.

After considering information collected during the farm tour and the in-office review, Penders assigns a final score. The score affects the ability of all the dairies in the area to ship milk into interstate commerce.

"It's my job to ensure that the food safety officers have taken regulatory action against any dairy farm or plant that is out of compliance with our standards," he said. "I tour farms and look at food safety records.

"When I'm sure I've reviewed all the information, I submit a report card for all dairies in a geographical area to the U.S. Food and Drug Administration."

A satisfactory grade allows the dairies to be listed in the Sanitation Compliance Listing of Interstate Milk Shipments. If they are not listed, they can't sell in interstate commerce.



Penders inspects a medicine chest to ensure that only approved medications are used on dairy cows.

"One dairy can halt interstate sales for all the dairies in an area if I find serious problems," Penders said.

"But that hasn't happened. One area had problems last year, and another in 1997. In both cases, the majority of farms in the area didn't pay enough attention to cleanliness. That is unusual. It didn't happen at all in the three years prior to 1997."

Consumers have always accepted the safety and quality of dairy products without question. The goal of the Food Safety Program and the dairy industry is to maintain that trust.

Despite the stress caused by increased emphasis on the environment, and the shrinking number of farms, the dairy industry in Washington will continue to prosper.

Facts about dairy cows

Cows came to this state in 1838.

☼Cows are milked twice a day, 10 months a year.

☼A cow has only bottom teeth. She curls grass around her tongue and pulls it into her mouth.

☼Washington cows produce 26 percent more milk than average due to the region's weather, quality feed and herd management.

☼Cows consume 100 pounds of food and 35 gallons of water a day! They excrete 34 pounds of liquid and solid waste.

☼The average cow weighs as much as 28 seven-year-olds.

☼Cows produce 100 glasses of milk a day.

Source: Washington Dairy Products Commission

Introducing Spotlight!

Spotlight will be published by the Communications Office about four times a year. It supplements *Ag Briefs* by providing indepth coverage of an issue or program. If you have an idea for *Spotlight*, please contact Linda Waring or Mike Louisell.



Don Penders considers information collected during a farm tour and an in-office review to assign a final score that affects the ability of all the dairies in an area to ship milk into interstate commerce.

Milk production up, farms down

Green as far as you can see. A red barn. Golden sunlight. Black-and-white Holsteins grazing far away in a peaceful pasture.

It's a familiar scene. One that's quickly fading as family farms give way to tract homes and big industry moves into the dairy business.

In 1988 there were 3,000 farm operations with milk cows in Washington. Today there are 760. Still, milk production has

climbed, reaching its all-time high of 5.326 billion pounds in 1998.

"We've witnessed the creation of the wonder cow," said Don Penders, a milk rating officer in Olympia.

"When I began work in 1975, a good cow produced 45 pounds of milk a day and lived about seven years.

"Today, good cows produce about 80 pounds of milk a day. Most are slaughtered after only three years.

"It's ironic. A modern farmer would probably get rid of a cow if she only produced 45 pounds of milk a day."

"It's hard for dairy farmers to make it in today's market," said Bob Soderstrom, a food safety officer in Olympia.

"They work hard but the price of milk is low. The more they produce, the lower the prices.

"It's the simple rule of supply and demand. Big dairies are getting



bigger, and small dairies are dying."

Last year, 106 farm

operations dropped out of the dairy business.

Successful food safety partnership honored

In 1997 *queso fresco*, a traditional soft white Mexican cheese usually produced from raw unpasteurized milk and untreated animal gut, was implicated in an outbreak of antibiotic-resistant *Salmonella typhimurium* DT104 in Yakima County.

From 1992 to 1997, the annual rate of infections rose from 5.4 to 29.7 cases per 100,000, according to the state Department of Health. In 1997, 90 illnesses were linked to *queso fresco*.

The Centers for Disease Control and Prevention estimates that for every reported case of *Salmonella*, there are 60 unreported cases.

A coalition was formed among representatives from Washington State University Cooperative Extension, the state Department of Agriculture and Yakima County Health District. Their goal was to educate the public about the dangers of consuming raw milk products and encourage home cheese makers to try a modified recipe substituting raw milk with pasteurized.

The community-based food safety intervention, called "The Abuela (Grandmother) Project," enlisted local Hispanic volunteers to educate the community about health risks associated with raw milk and provide a safe alternative to the traditional recipe.

Fifteen abuelas were taught to make the new recipe. Abuelas were chosen because they hold positions of respect and authority in the Hispanic community. In turn, the abuelas agreed to train at least 15 neighbors.

Assistance also was provided to two individuals to become licensed producers of commercially available queso fresco.

About 250 Yakima County residents have received training so far. The project has been expanded to Adams, Benton, Chelan, Douglas, Franklin, and Grant counties with about 45 Abuela Educators in those counties.

The success of the project is exemplified by the drop in *Salmonella* infections in Yakima valley – from 105 cases in 1996 - 1997 to two since the project began in November 1997.

Unpasteurized milk can cause illness

Risks associated with the consumption of raw milk have long been recognized by health officials. The U.S. Food and Drug Administration prohibits the sale of raw milk across state lines. Sale of unpasteurized milk within state boundaries is legal in about 25 states, including Washington.

Pasteurization kills the harmful bacteria commonly found in milk. All dairies that sell unpasteurized milk in Washington must warn consumers that their product may contain harmful bacteria.

Three Washington dairies are licensed to sell unpasteurized milk. These dairies must meet special requirements, as well as bottling and bacterial testing required of pasteurized milk.

No dairy may legally sell or distribute raw milk other than for pasteurization, unless it meets these criteria. Dairy products other than milk cannot be manufactured, except for cheese that is aged a minimum of 60 days.

Since 1990, seven Washington outbreaks, involving 117 people, were linked to unpasteurized milk or dairy products made from unpasteurized milk.